

II. CLAIM AMENDMENTS

1.-15. (Cancelled)

16. (Currently Amended) A first network element of a cellular network for implementing a messaging service between a messaging server external to the cellular network and a terminal of the cellular network, wherein the first network element comprises:

means for receiving a first inquiry sent by the messaging server, the first inquiry comprising a request to determine the readiness of said terminal of the cellular network to receive data;

means for determining readiness of said terminal to receive data;

means for sending a first response message to the messaging server in response to said first inquiry, the first response message comprising information on the readiness of said terminal to receive data-, wherein

said first network element of the cellular network is capable of knowing values of parameters relating to the readiness of terminals of the cellular network to receive data, the readiness of said terminal to receive data through said first network element being interpreted with the help of said parameter values, the first network element comprising:

for a situation, where said terminal is ready to receive data through the first network element:

means for indicating said readiness in said first response message to said messaging server; and

for a situation, where said terminal is not ready to receive data through the first network element:

means for sending a second inquiry to a home location register of the cellular network to determine a set of

permissible network elements of the cellular network, the network elements belonging to the set of permissible network elements having in their knowledge values of parameters relating to the readiness of terminals to receive data, and through which network elements said terminal has the ability to receive data; and

means for receiving in response to said second inquiry a second response message from the home location register, the second response message indicating said set of permissible network elements to said first network element.

17. (Currently Amended) A first network element according to claim 16, wherein said first network element is a gateway support node of a GPRS cellular network.

18. (Currently Amended) A computer program product executable in a first network element of a cellular network for implementing a messaging service between a messaging server external to the cellular network and a terminal of the cellular network, wherein the computer program product comprises:

program code for causing the first network element of the cellular network to receive a first inquiry sent by the messaging server, the first inquiry comprising a request to determine the readiness of said terminal of the cellular network to receive data;

program code for causing the first network element of the cellular network to determine the readiness of said terminal to receive data;

program code for causing the first network element of the cellular network to send a first response message to the messaging server in response to said first inquiry, the first response message comprising information on the readiness of

said terminal to receive data-, wherein

said first network element of the cellular network is capable of knowing values of parameters relating to the readiness of terminals of the cellular network to receive data, the readiness of said terminal to receive data through said first network element being interpreted with the help of said parameter values, the computer program product comprising:

for a situation, where said terminal is ready to receive data through the first network element:

program code for causing the first network element to indicate said readiness in said first response message to said messaging server; and

for a situation, where said terminal is not ready to receive data through the first network element:

program code for causing the first network element to send a second inquiry to a home location register of the cellular network to determine a set of permissible network elements of the cellular network, the network elements belonging to the set of permissible network elements having in their knowledge values of parameters relating to the readiness of terminals to receive data, and through which network elements said terminal has the ability to receive data; and

program code for causing the first network element to receive in response to said second inquiry a second response message from the home location register, the second response message indicating said set of permissible network elements to said first network element.

19. (Currently Amended) A system comprising a messaging server external to a cellular network and a first network element of the cellular network for implementing a messaging service

between the messaging server and a terminal of the cellular network, the messaging server comprising:

means for receiving a message addressed to said terminal at the messaging server, wherein the messaging server comprises:

means for sending a first inquiry to the first network element of the cellular network to determine the readiness of said terminal to receive data, and that the first network element of the cellular network comprises:

means for determining the readiness of said terminal to receive data; and

means for sending a first response message to the messaging server in response to said first inquiry, the first response message comprising information on the readiness of said terminal to receive data-, wherein

said first network element of the cellular network is capable of knowing values of parameters relating to the readiness of terminals of the cellular network to receive data, the readiness of said terminal to receive data through said first network element being interpreted with the help of said parameter values, the first network element comprising:

for a situation, where said terminal is ready to receive data through the first network element:

means for indicating said readiness in said first response message to said messaging server; and

for a situation, where said terminal is not ready to receive data through the first network element:

means for sending a second inquiry to a home location register of the cellular network to determine a set of permissible network elements of the cellular network, the network elements belonging to the set of permissible network elements having in their knowledge values of parameters relating to the readiness of terminals to receive data, and through which network elements

said terminal has the ability to receive data; and
means for receiving in response to said second inquiry a
second response message from the home location register, the
second response message indicating said set of permissible
network elements to said first network element.

20. (Currently Amended) A method for implementing a messaging service between a terminal of a cellular network and a messaging server external to the cellular network, the method comprising:

receiving a message addressed to said terminal at the messaging server, wherein the method comprises;

sending a first inquiry from the messaging server to a specific first network element in the cellular network to determine the readiness of said terminal to receive data;

determining the readiness of said terminal to receive data as a result of operations performed by the first network element;

sending a first response message from the first network element of the cellular network to said messaging server in response to said first inquiry, in which response message the readiness of said terminal to receive data is indicated;

wherein values of parameters relating to the readiness of terminals of the cellular network to receive data are known to said network element of the cellular network and that the readiness of said terminal to receive data through said first network element is interpreted with the help of said parameter values, the method further comprising:

in a situation, where said terminal is ready to receive data through said first network element, indicating said readiness in said first response message to said messaging server; and

in a situation, where said terminal is not ready to receive data through said first network element, sending a second inquiry to a home location register of the cellular network to determine a set of permissible network elements of the cellular network, the network elements belonging to the set of permissible network elements having in their knowledge values of parameters relating to the readiness of terminals to receive data, and through which network elements said terminal has the ability to receive data, and sending in response to said second inquiry a second response message from the home location register to said first network element, the second response message indicating said set of permissible network elements to said first network element.

21. (Previously Presented) A method according to claim 20, wherein after said second response message has indicated said set of permissible network elements to said first network element, a third inquiry is sent to at least one second network element belonging to the set of permissible network elements by said first network element to determine the readiness of said terminal to receive data through said second network element, the method comprising:

in a situation, where said terminal is ready to receive data through said second network element, transmitting information on said readiness in response to said third inquiry from the second network element to the first network element; and

indicating said readiness in said first response message to said messaging sever.

22. (Previously Presented) A method according to claim 20, wherein in a situation, where said terminal is ready to

receive data through a specific network element, the method comprises sending said message addressed to the terminal from the messaging server to the terminal through said specific network element.

23. (Previously Presented) A method according to claim 20, wherein in a situation, where said terminal is not ready to receive data through any said network element, the method comprises repeating said first inquiry after a specific period of time.

24. (Previously Presented) A method according to claim 20, wherein said network elements are gateway support nodes of a GPRS (General Packet Radio Service) network.

25. (Previously Presented) A method according to claim 20, wherein the IP address of said terminal is indicated to said messaging server in said first response message.

26. (Previously Presented) A method according to claim 20, wherein one of the following is used to identify the terminal MS in the cellular network: an IMSI (International Mobile Subscriber Identity) code, an IMUI (International Mobile User Identity) code.

27. (Previously Presented) A method according to claim 20, wherein a specific identifier external to the cellular network is used between the cellular network and the messaging server to identify the terminal.

28. (Previously Presented) A method according to claim 20, wherein said messaging server transfers a multimedia message

to said terminal.

29. (Previously Presented) A method according to claim 20, wherein said first inquiry is always sent from the messaging server to the same first network element.

30. (Previously Presented) A method according to claim 20, wherein data transmission is effected in a packet switched mode.